Claims 1-31 were pending prior to the present amendments. Claims 16 and 18 are canceled. Claims 6-7, 14, 17 and 19 are amended to more particularly point out and distinctly claim Applicants' invention.

The Examiner rejected Claims 7 and 18 under 35 U.S.C. § 112, second paragraph. The Examiner states:

> The language in claim 7, "wherein said transmitting comprises: calculating a distance" fails to clearly point out the subject matter since it is not clear how a step of transmission is capable of calculating a distance.
>
> In claim 18, the language "a current location of said second mobile unit traveling from said processing station to said first unit" is not understood.

Claims 7 is amended to more particularly point out and distinctly claim Applicants' invention. Claim 18 is canceled. As amended, the Examiner's objection to the language of Claim 7 is believed overcome.

The Examiner rejected Claims 1-3, 6-11, 14-17, 19-21, 23, and 26-29 under 35 U.S.C. 102(e) as being clearly anticipated by U.S. Patent 6,317,605 ("Sakuma"). The Examiner states:

> Sakuma discloses the claimed system for providing a first mobile phone with location information of a second mobile phone wherein each mobile phone registers with a location database that stores the locations of all registered mobile phones. Upon request by a first mobile phone, the location of the second mobile phone is provided. Additionally, map information may be communicated by the location database along with the location information (Note: JP 10 094028 A corresponds to the Japanese equivalent to the cited US patent and was published April 10, 1998). There is nothing that patentably distinguishes the interconnected nodes between which information is downloaded and retrieved via communication links in Sakuma and the claimed

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"internet"/"service provider".

Applicants respectfully traverse the Examiner's rejection. Claim 1 recites:

> receiving from said first mobile unit a first packet including a current location of said first mobile unit;
>
> receiving from said second mobile unit a second packet including a current location of said second mobile unit;
>
> storing said current locations in a database; and
>
> transmitting a data package to said first mobile unit in response to a request from said first mobile unit, wherein said data package comprises said current location of said second mobile unit retrieved from said database.

(emphasis added)

The above-quoted limitations are neither disclosed nor suggested by Sakuma. In Sakuma, the mobile units (i.e., the mobile terminals PS_i's) do not determine their own locations, and thus do not send their locations in data packets to be stored in a database. Rather, Sakuma's mobile units receive the locations of radio cell stations (i.e., cell stations CS_i's) sent to them by a switching center, which looks up the cell station locations from a system database:

> Each radio cell station CS forms a micro cell of the order of 100 to 500 meters in which a mobile terminal (or a personal station) communicates with that radio cell station by radio. The radio cell stations are placed to cover the service area with their micro cells. As will be described later, the location of a mobile terminal can be detected depending on which micro cell the mobile terminal is located in. Since each micro cell is 100 to 500 meters diameter, the detected location of the micro terminal has an error of 100-500 meters at the maximum.

> *   *   *

> Referring to FIGS. 4 and 5, when a mobile terminal (here, PS_1) moves from outside the service area into the micro cell of the radio cell station CS_1 or when the mobile terminal is powered on within the service area, the mobile terminal PS_1

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receives the control signal from the radio cell station CS_1 and then transmits a location registration request message to the radio cell station CS_1. As shown in FIG. 5A, the location registration request message conveys the cell station ID number $CS\text{-}ID_1$ and the self ID number $PS\text{-}ID_1$.

When receiving the location registration request message, the radio cell station CS_1 transfers it to the mobile switching center 102 which uses the location information database 101 to perform the location registration of the mobile terminal PS_1. This causes the database 101 to be updated such that the mobile terminal PS_1 is added to the located terminal field for the radio cell station CS_1. After that the mobile switching center 102 reads the absolute location data of the radio cell station CS_1 from the database 101 and then transmits a location registration response message back to the mobile terminal PS_1.

(emphasis added; Sakuma at col. 2, lines 43-53; col. 3, lines 48-67)

Thus, contrary to the Examiner's assertion, the above-quoted steps of Claim 1 are neither disclosed nor suggested by Sakuma. Accordingly, Claim 1 and dependent Claims 2-3 and 6-11 are therefore allowable over Sakuma. Similarly, Claim 14, 20 and 23 each recite that the mobile units provide their locations to the database:

> 14. An apparatus for tracking the location of a second mobile unit from a first mobile unit, said apparatus comprising:
>
> > a processing station that receives location data from said first and second mobile units;
> >
> > a database of said location data connected to said processing station; and
> >
> > a data network through which packets are sent between said processing station and said first and said second mobile units, wherein said packets comprise a current location of said second mobile unit being sent from said processing station to said first mobile unit in response to a request from said first mobile unit.
>
> *   *   *
>
> 20. A method of providing the current location of a

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second mobile unit to a first mobile unit, said method comprising:

> said first mobile unit transmitting a first packet to a service provider computer, said first packet indicating the current location of said first mobile unit;
>
> said second mobile unit transmitting a second packet to said service provider computer, said second signal indicating the current location of said second mobile unit;
>
> said service provider computer receiving said first and second signals and storing said current locations of said first and said second mobile units in a database;
>
> said service provider computer retrieving said current location of said second mobile unit from said database in response to a request from said first mobile unit; and
>
> said service provider computer transmitting said current location of said second mobile unit to said first mobile unit.

                    *   *   *

23.   A system, comprising:

> a first mobile unit and second mobile unit connected to a data network; and
>
> a processing station connected to said data network and receiving current locations over said data network from said first and second mobile units, the processing station connected to a database storing said current locations of said first and second mobile units and, upon request from the first mobile unit, providing the first mobile unit the stored current location of the second mobile unit.

(emphasis added)

Thus, Claim 14, 20 and 23 and their respective dependent Claims 15, 17, 21, 23 and 26-29 are each allowable over Sakuma. Reconsideration and allowance of Claims 1-3, 6-11, 14-15, 17, 19-21, 23, and 26-29 are therefore requested.

The Examiner rejected Claims 1-3, 6-11, 13-17, 19-23, and 26-30 under 35 U.S.C. § 102(e) as being clearly anticipated by U.S. Patent 6,456,852 ("Bar"). The Examiner states:

> Bar et al disclose a database/database server that maintains a dynamic database of current cellular (mobile) users, including identification and location. The central server may be accessed by third-party subscribers or the users themselves. Upon receiving a query from a subscriber (or user), the server accesses the database and sends a response providing real-time location based information/services.

Applicants respectfully traverse the Examiner's rejection. As in Sakuma, Bar also does not disclose or suggest the mobile units providing their locations in data packets. Instead, Bar discloses in Fig. 2 and at col. 3, lines 37-41, that the locations of mobile units are determined by the base stations using conventional techniques:

> FIG. 2 shows a subsystem of the system shown in FIG. 1. A cellular phone 26 transmits signals 28 which are received by one or more location finding base stations 12. Base stations 12 may determine the location of phone 26 by one of, or a combination of, several location finding techniques.

Thus, as in Sakuma, Bar neither discloses nor suggests any of Applicants' Claims 1, 14, 20 and 23, nor their respective dependent Claims 2-3, 6-11, 13, 15, 17, 19, 21-22, and 26-30. Accordingly, Applicants request reconsideration and allowance of Claims 1-3, 6-11, 13-15, 17, 19-23 and 26-30.

The Examiner rejected Claims 24 and 25 under 35 U.S.C. § 103(a) as being unpatentable over either one of Sakuma or Bar in view of U.S. Patent 6,292,747 ("Amro"). The Examiner states:

> Each of Sakuma and Bar et al teach the subject matter substantially as claimed as previously set forth above but fail to teach the use of GPS receivers in the mobile users to provide the mobile user position. Rather each uses an alternative, known position determining method. Amro et al teach the conventionality of mobile users associated with a wireless network and desiring location based information to utilize a

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conventional GPS receiver to provide the user self-position. It
would have been obvious to one having ordinary skill in the art
at the time the invention was made to modify either one of
Sakuma of Bar et al by integrating a conventional GPS receiver
within the communication device to provide accurate position
information at a low cost in view of the dominance of GPS as
an accurate source of location information that is low cost and
lightweight.

Applicants respectfully traverse the Examiner's rejection. The Examiner's proposed

combination is specifically taught against by both Sakuma and Bar. In particular, Sakuma

teaches, at col. 1, lines 36-44:

Further, the conventional mobile terminal needs the GPS
receiver, resulting in increased amount of hardware and
complicated circuit in the mobile terminal.

An object of the present invention is to provide a mobile
communications system and a mobile terminal which can
provide the location information of both the mobile terminal
and another mobile terminal with reduced size and weight.

Thus, Sakuma specifically teaches against incorporating a GPS receiver in the mobile

terminal.

With respect to Bar, Bar teaches, at col. 5, lines 34-41, that its method allows positions

of the cellular phones to be determined without modification of certain existing standards,

even if the cellular phones are not in use:

Note that the automatic registration protocol in certain cellular
standards allows the determination of a phone location even
when the phone is not in use. In this case, location information
can be provided even for users who are not actively using their
phones. The server, therefore, may provide additional services
such as generating a map indicating the real time locations of all
the members of an organization.

However, the Examiner's proposed combination would require a modification of the

existing standards to include the locations of the cellular phones in the registration procedure.

Thus, Applicants submit that the Examiner's proposed modification would destroy the prized

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utility of Bar's method (i.e., obtaining the locations of the cellular phones without standard modification). Accordingly, as the Examiner's proposed combinations are taught against by both Sakuma and Bar, Claims 24 and 25 are allowable over Sakuma or Bar and Amro, whether considered individually or in any combination.

The Examiner rejected Claims 4, 5, 12 and 31 under 35 U.S.C. § 103(a) as being unpatentable over either one of Sakuma or Bar et al in view of Schilit et al.

> Each of Sakuma and Bar et al teach the subject mater substantially as claimed as previously set forth above but fail to teach the various groupings and exclusions of the response information. Schilit et al teach a mobile distributed computing system that enables groups of users to be provided with downloaded information in response to a single user request as well as the ability to selectively exclude users from being tracked. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify either one of Sakuma or Bar et al by including a list of subscribers/users in the inquiry in order to provide the location-based information to more than one member of an associated group in view of the teachings of Schilit et al. Moreover, it would have been obvious to selectively exclude certain users from being tracked in view of the teachings of Schilit et al.

Applicants respectfully traverse the Examiner's rejection. As the Examiner's combinations do not cure either Sakuma's or Bar's deficiencies relative to Claim 1, Applicants submit that Claims 4, 5 and 12, each depending from Claim 1, are allowable over the combined teachings of Schilit with Sakuma or Bar. Claim 31, which depends from Claim 23, is similarly allowable over the combined teachings of Schilit with Sakuma or Bar. Reconsideration and allowance of Claims 4-5, 12 and 31 are therefore requested.

The Examiner rejected Claims 1-31 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,339,745 ("Novik"). The Examiner states:

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Novik teaches the subject matter substantially as claimed including a plurality of mobile users that each send location information via a communication signal to a central station having a location database that tracks the mobile users. Each mobile user is provided with conventional communication means for bi-directionally communicating with the central station. The central station has a database for tracking all of the mobile users as well as provides location-based information to the mobile user. Thus, the mobile stations are capable of transmission and reception with the central station and vice versa. The central station is aware of the locations of all mobile users as well as sends location-based information to the users. Novik differs only in that the communication from a mobile user is not specified as a request for position of a second user. However, the first user is capable of communicating with the central station and requesting any positional information, and, the central station is fully aware of the positions of all second users and sends position-based information to the first user. It would have been obvious to one having ordinary skill in the art given the system of Novik for the user of the first mobile to request positional data of a second mobile in the normal communication transfer between the first user and the central station in order for the first mobile to ascertain directions to meet up with the second mobile user for the purposes of exchanging packages during courier services or for meeting for lunch/dinner.

Applicants argue that claim 1 includes language that specifies a requesting user to obtain information of others based on its own information and that this is not shown in the prior art. Applicants allege that claims 2-16 are dependent upon claim 1 and as such are also allowable. Applicants also allege that each of the claims 20 and 23 also includes such a limitation. Firstly, the step of requesting information of another mobile user is not deemed to be patentable for reasons set forth above including the fact that all of the components are readily present in Novik. Contrary to the applicants' remarks, claim 14, an independent claim does not include such a request for information. Lastly, the central station does send the first mobile user positional information upon request; for the request to include a particular mobile user is not deemed to be patentably distinguishable over the prior art.

Applicants respectfully traverse the Examiner's rejection. As pointed out in

Applicants' Amendment of July 2, 2002, Claim 1 recites limitations that allow a mobile user

to obtain location information of other mobile users:

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transmitting a data package to said first mobile unit in
response to a request from said first mobile unit, wherein said
data package comprises said current location of said second
mobile unit retrieved from said database

Contrary to the Examiner's assertion, Novik does not teach "the first user is capable

of communicating with the central station and requesting any positional information" or "the

central station does send the first mobile user positional information upon request." If the

Examiner disagrees, the Examiner is respectfully requested to point out where in Novik the

Examiner finds these teachings. Not only does Novik not provide the teaching of Applicants'

Claim 1, Novik also does not provide the Examiner's rationale or motivation for modifying

the teachings of Novik in the direction of Applicants' Claim 1. The Examiner's assertion that

"[it] would have been obvious to one having ordinary skill in the art given the system of

Novik for the user of the first mobile to request positional data of a second mobile in the

normal communication transfer between the first user and the central station in order for the

first mobile to ascertain directions to meet up with the second mobile user for the purposes of

exchanging packages during courier services or for meeting for lunch/dinner" is simply not

found in Novik. That is, the functions of exchanging packages during courier services or for

meeting for lunch/dinner are not taught in Novik. Without bases from the prior art reference

to suggest the proposed adaptation of Novik, the Examiner is merely rejecting Claim 1 and its

dependent Claims 2-13 based on speculation from an impermissible hindsight reconstruction

of Applicants' Claims 1-31, using Applicants' claims and Specification as a blueprint.

Accordingly, Applicants respectfully submit that Claims 1-13 are allowable over Novik.

Claims 14, 20 and 23 similarly recite:

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14.   ... a data network through which packets are sent
between said processing station and said first and said second
mobile units, wherein said packets comprise a current location
of said second mobile unit being sent from said processing

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station to said first mobile unit in response to a request from said first mobile unit.

*   *   *

20.   ... said service provider computer retrieving said current location of said second mobile unit from said database in response to a request from said first mobile unit; and

said service provider computer transmitting said current location of said second mobile unit to said first mobile unit.

*   *   *

23.   ... a processing station connected to said data network and receiving current locations over said data network from said first and second mobile units, the processing station connected to a database storing said current locations of said first and second mobile units and, upon request from the first mobile unit, providing the first mobile unit the stored current location of the second mobile unit.
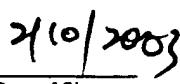
Thus, Applicants respectfully submit that Claims 1, 14, 20 and 23 and their respective dependent Claims 2-13, 15, 17, 19, 21-22, 24-31 are each similarly allowable over Novik.

Reconsideration and allowance of Claims 1-15, 17, 19-31 are therefore requested.

Therefore, all pending claims (i.e., Claims 1-15, 17 and 19-31) are allowable over the art of record. If the Examiner has any question regarding the above, the Examiner is respectfully requested to telephone the undersigned Attorney for Applicants at 408-392-9250.

Respectfully submitted,
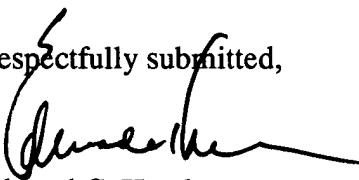
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